



SGM 6945.4
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of William K. Kappel et al.

Serial No. 10/667,928

Filed September 22, 2003

For METAL CHELATING COMPOSITIONS FOR PROTEIN PURIFICATION, DETECTION
OR BINDING

December 23, 2003

COMMISSIONER FOR PATENTS

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SIR:

INFORMATION DISCLOSURE STATEMENT

* In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the
duty of disclosure set forth in 37 C.F.R. 1.56, applicants submit the attached PTO/SB/08A for
consideration by the Patent and Trademark Office in the above-entitled application and to be
made of record therein. In accordance with the Pre-OG notice of July 11, 2003 partially waiving
the requirements of 37 C.F.R. 1.98(a)(2)(i), copies of the U.S. patent documents are not supplied.

The references listed on the attached PTO/SB/08A have been previously submitted in
parent application Serial No. 09/558,001 and, therefore, in accordance with MPEP 609, are not
being provided at this time.

Respectfully submitted,

Edward J. Hejlek, Reg. No. 31,525
SENNIGER, POWERS, LEAVITT & ROEDEL
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

EJH/JPK/mlw

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PTO/SB/08A INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/667,928
				Filing Date	September 22, 2003
				Confirmation Number	To be assigned
				First Named Inventor	William K. Kappel et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
	1	2,205,995		Ulrich et al.	06-25-1940
	2	2,885,428		Luskin	05-05-1959
	3	3,337,607		Wollensak	08-22-1967
	4	3,959,342		Homberg et al.	05-25-1976
	5	4,569,794		Smith et al.	02-11-1986
	6	4,664,806		Merz	05-12-1987
	7	4,677,027		Porath et al.	06-30-1987
	8	4,877,830		Dobeli et al.	10-31-1989
	9	5,047,513		Dobeli et al.	09-10-1991
	10	5,284,933		Dobeli et al.	02-08-1994
	11	5,514,363		Shochat et al.	05-07-1996
	12	5,625,075		Srinivasan et al.	04-29-1997
	13	5,747,663		Colpan et al.	05-05-1998
	14	5,834,224		Ruger et al.	11-10-1998
	15	5,990,301		Colpan et al.	11-23-1999

Examiner Signature		Date Considered	
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¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached or place an "A" here if English language abstract is attached..

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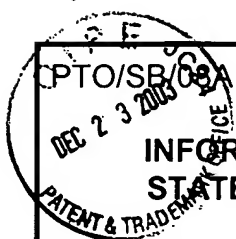
FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office	Number ⁴	Kind Code ² (if known)			
	16	EP	0 189 373	A2	Ciba-Geigy AG	07-30-1986	
	17	EP	0 253 303	A2	F. Hoffmann-La Roche & Co.	01-20-1988	
	18	WO	93/11735	A1	Aquanautics Corporation	06-24-1993	
OTHER ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.					T
	19	SCHMITT et al., "Affinity Purification of Histidine-tagged Proteins", Molecular Biology Reports, 1993, pp. 223-230, Vol. 18					
	20	PORATH et al., "Immobilized Metal Ion Affinity Adsorption and Immobilized Metal Ion Affinity Chromatography of Biomaterials. Serum Protein Affinities for Gel-Immobilized Iron and Nickel Ions", Biochemistry, 1983, pp. 1621-1630, Vol. 22					
	21	SULKOWSKI, "Immobilized Metal Ion Affinity Chromatography of Proteins", Protein Purification: Micro to Macro pp. 149-162, Edited by R. Burgess, Published by Liss New York, NY					
	22	International Search Report from analogous PCT application No. PCT/US01/11529 dated October 16, 2001					
	23	LONNERDAL et al., Journal of Applied Biochemistry, 1983, p. 203, Vol. 4					
	24	PORATH et al., "Metal Chelate Affinity Chromatography, a New Approach to Protein Fractionation", Nature, December 18, 1975, pp. 598-599, Vol. 258					

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25	HOCHULI et al., "New Metal Chelate Adsorbent Selective for Proteins and Peptides Containing Neighbouring Histidine Residues", Journal of Chromatography, 1987, pp. 177-184, Vol. 411
26	Partial International Search Report from analogous PCT application No. PCT/US01/11529
27	JANKNECHT et al., "Rapid and Efficient Purification of Native Histidine-tagged Protein Expressed by Recombinant Vaccinia Virus", Proc. Natl. Acad. Sci. USA, October, 1991, pp. 8972-8976, Vol. 88
28	F. ANSPACH, "Silica-based metal chelate affinity sorbents I. Preparation and characterization of iminodiacetic acid affinity sorbents prepared via different immobilization techniques", Journal of Chromatography A, 1994, pp. 35-49, Vol. 672

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